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## **Grass Won't Grow Over a Stump**

The lawn might be greener over the septic tank, but it's difficult to grow grass or other plants where a tree was recently removed. This might seem like a minor, or unusual problem for discussion but our office regularly receives questions as to why this happens. It can be dealt with, as long as the gardener understands what is happening in the soil.

The condition is technically known as "nitrogen robbing," and is a biological response to the sudden introduction of large amounts of dead wood parts to the soil. Whether present as sawdust, stump grindings or what is left of the stump itself, this material is high in carbon.

To microbes in the soil this is a food source and they quickly begin multiplying in large numbers and begin to decompose it. This is a natural biological recycling process, and in most cases it is a good thing. If this didn't happen, then we would be wading through dead plant and animal parts most of our lives, and all soils would be very poor indeed.

As these microbes increase in numbers, they must have more and more nitrogen which is converted to proteins. Available nitrogen in the soil is quickly used up. It is not lost, it is temporarily being utilized in the bodies of these soil borne flora and fauna. It will be released later, when the woody material is completely broken down, and the microbes begin to die off.

In the mean time, for a period of months or years - depending upon how much woody stuff there is to be decomposed, nitrogen robbing occurs. Grass, flowers, vegetables or other plants established in a spot where all of this activity is underway simply won't grow because they are starved for nitrogen. Actually, a better term might be "nitrogen borrowing," because it is not actually lost.

This condition can be at least partially avoided by the removal of as many stump

parts as possible. This includes sawdust, grindings, bark pieces and roots. These parts can be composted for later use as a soil amendment.

The area can also be provided with some extra nitrogen fertilizer on a regular basis. This helps to provide enough of that nutrient for both the microbes and any nearby plants. The extra nitrogen will speed up the decomposition process and reduce the number of yellow, stunted grass and other plants in adjacent areas.

At the risk of boring readers, this condition has to do with an imbalance in the carbon to nitrogen ratio. The best ratio of these two elements is somewhere between 20 to 1 and 30 to 1, in order for rapid decomposition to occur. The woody material, being the carbon containing portion, is extremely high at first, while the native soil is very low in nitrogen. That's the reason that these areas where trees once grew are barren for so long.

Left alone, things will settle down to normal without doing anything extra. My personal experience however, has been that grass won't grow well for 3 to 4 years in these areas without some help.

**Question of the Week:** What kind of grass will grow well under a large shade tree?

**Answer:** All turfgrasses prefer full sunlight, though some species tolerate shade better than others. The St. Augustine grasses are generally considered to be the most shade tolerant, with some varieties rated higher for this characteristic than others.

Bitterblue and Seville are listed as having very high shade tolerance, while Raleigh, Delmar and Jade are rated as good. There is often a trade-off when choosing a grass for a specific characteristic, such as shade tolerance. Some of the more shade tolerant varieties for example, might not have the best cold tolerance or chinch bug resistance.

Mow extra high when attempting to grow grass underneath trees. Some of the standard St. Augustines should be mowed at 4 inches in the shade. This provides more leaf surface area to receive sunlight and reduces the amount of thin turf. There is also much competition from tree roots under shady conditions. Extra water and nutrients could be required.